Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

CONDITIONAL MAJOR OPERATING (DRAFT PERMIT) NO. F-04-009
BLUE GRASS COOPERAGE COMPANY
ALBANY, KY
MARCH 15, 2004
RALPH E. GOSNEY, REVIEWER
PLANT I.D. # 21-053-00015
APPLICATION LOG # 54410

SOURCE DESCRIPTION:

There are two state permits for the facility (S-99-119 and S-96-121) with 6 emission unit groups and 2 processes for group 6. An application was received on February 1, 2002 for renewal of permit S-96-121, and deemed complete on April 2, 2002. There is no existing source-wide permit for the facility.

There was a state limit for the processing rate in permit S-96-121, which stated that the logs processed shall not exceed 22.8 tons/hr. Additional information was received on February 13, 2004 for a new application as a conditional major source-wide permit. The source accepted a limit of 50 tons of logs processed per hour to limit potential emissions less than 100 tons per year of particulate matter less than 10 microns (PM_{10}).

Raw material in the form of white oak logs is shipped by truck to this facility. The logs are stored, debarked, and cut to length outside. The wood is processed inside into wood staves (used for making barrels). Wood chips and sawdust are processed through a wood chipper and process cyclone. Sawdust is used as a fuel source for a wood-fired boiler. Steam from the boiler is used to provide heat to the six stave curing kilns.

The following is a list of significant emission units.

COMB1	E. Unit 12	Wood-fired boiler – 8.28 mmBtu/hr
EQPT1	E. Unit 01	Debarking Operations
EQPT2	E. Unit 02	Sawing Operations – end piece trim log cutting
EQPT3	E. Units 3-11, &13	Cyclone dust handling system Collected chips stream from E. Units 04, 05, 06, 08, and 10 to E. Unit 13 Collected sawdust stream from E. Units 02–10, and 13 to E. Unit 11.

COMMENTS:

COMB1 E. Unit 12 Wood-fired boiler – 8.28 mmBtu/hr

The 8.28 mmBtu/hr boiler combusts the generated green (unseasoned) sawdust. The boiler is equipped with a flyash re-entrainment cyclone that sends the uncombusted fly-ash back to the combustion chamber.

401 KAR 59:015, New Indirect Heat Exchangers applies to new affected facilities less than 250 mmBtu/hr commenced on or after April 9, 1972. The unit shall have emission of sulfur dioxide (SO_2) less than or equal to 5.0 lb/mmBtu actual heat input for combustion of solid fuels. Particulate matter (PT) emissions shall not exceed 0.56 lb/mmBtu actual heat input. Continual compliance for SO_2 and PT emissions will be assumed, based on AP-42, Section 1.6, emission factors of 0.025 lb of SO_2/mmBtu and 0.22 lb of PT/mmBtu. There is also a 20% opacity limitation for visible emissions from the stack, and compliance will be demonstrated by weekly qualitative visual observation and monthly EPA Reference Method 9 monitoring and record keeping.

EQPT1	E. Unit 01	Debarking Operations
EQPT2	E. Unit 02	Sawing Operations – end piece trim log cutting

Logs go through a debarking operation and cut into roughly 10-foot lengths with a bar saw. The units are located outside. There is some pneumatic pick up of PT generated during the cross cutting of the log. Water suppression nozzles are manually activated to wet the log prior to debarking when unacceptable visible emissions are observed from this process. The proposed operating rate is 50 tons per hour of logs. For emission reporting, it is assumed that one log weighs 1 ton.

401 KAR 63:010 Section 1, Fugitive emissions is applicable to each affected facility which emits or may emit fugitive emissions and is not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality. No person shall cause or permit the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. In addition, reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including the materials processed at each unit listed above shall be controlled with wet suppression and/or enclosures so as to comply with the standards specified in Section 3 of 401 KAR 63:010, Fugitive emissions. Compliance will be demonstrated by observations and records, if applicable, shall be utilized to document failure to comply. Otherwise, compliance is assumed when daily observations indicate that the processes and controls are operating normally.

EQPT3	E. Units 3-11, &13	Cyclone dust handling system Collected chips stream from E. Units 04, 05, 06, 08, and 10 to E. Unit 13 Collected sawdust stream from E. Units 02–10, and 13 to E. Unit 11.

Identification point EQPT3 is the cyclone dust handling system and consists of several emission units. Waste wood and wood chips are collected from the following emission units: 04 (Dual 4'Filer/Stowell board sawing operation); 05 (Cross-cut board sawing operation); 06 (Dual rip-saw stave edge sawing operation); 08 (Wine barrel stave re-work operation); and 10 (Special order operation). This material all goes to emission unit 13 (Chipper). The chips are blown into receiving trailers.

Sawdust is collected from emission unit 13 (Chipper), as well as the following emission units: 02 (Sawing operations, log cutting); 03 (7' Filer/Stowell log quartering operation); 04 (Dual 4'Filer/Stowell board sawing operation); 05 (Cross-cut board sawing operation); 06 (Dual rip-saw stave edge sawing operation); 07 (Chop and edge saw rework operation); 08 (Wine barrel stave re-work operation); and 10 (Special order operation). Collected sawdust from these emission units go through one of two process cyclones (Emission unit 11) and is fed to the wood-fired boiler or stored

in a silo.

401 KAR 59:010, New process operations is applicable to each affected facility associated with a process operation commenced after July 2, 1975 and limits particulate emissions. Each unit shall have a maximum emission of PT (Particulate Matter) <= 40.59 lbs/hr. Compliance will be demonstrated from the following emission calculation basis and monitoring requirements: PT emissions in pounds per hour = (daily processing rate in tons/day)(1 day/hours of operation that day)(emission factor of 0.376 lb PT/ton of logs). Each unit shall have Visible Emissions < 20 % opacity. Compliance will be demonstrated by weekly qualitative visual observation and monthly EPA Reference Method 9 monitoring and record keeping.

Regulations not applicable:

401 KAR 52:020, Title V permits, does not apply to the facility. The source shall have a maximum source wide emissions of PM_{10} less than 100 tons/yr. The permittee shall demonstrate compliance with this limitation times a 90% safety factor, which would give a limit of 90 tons of PM_{10}/year. From the calculations presented in the application, this emission limit will be met by limiting the processing rate of logs through the facility to not exceed 50 tons/hr.

S:\Combust\Ralph\V-03-018 Kingsford Manufacturing